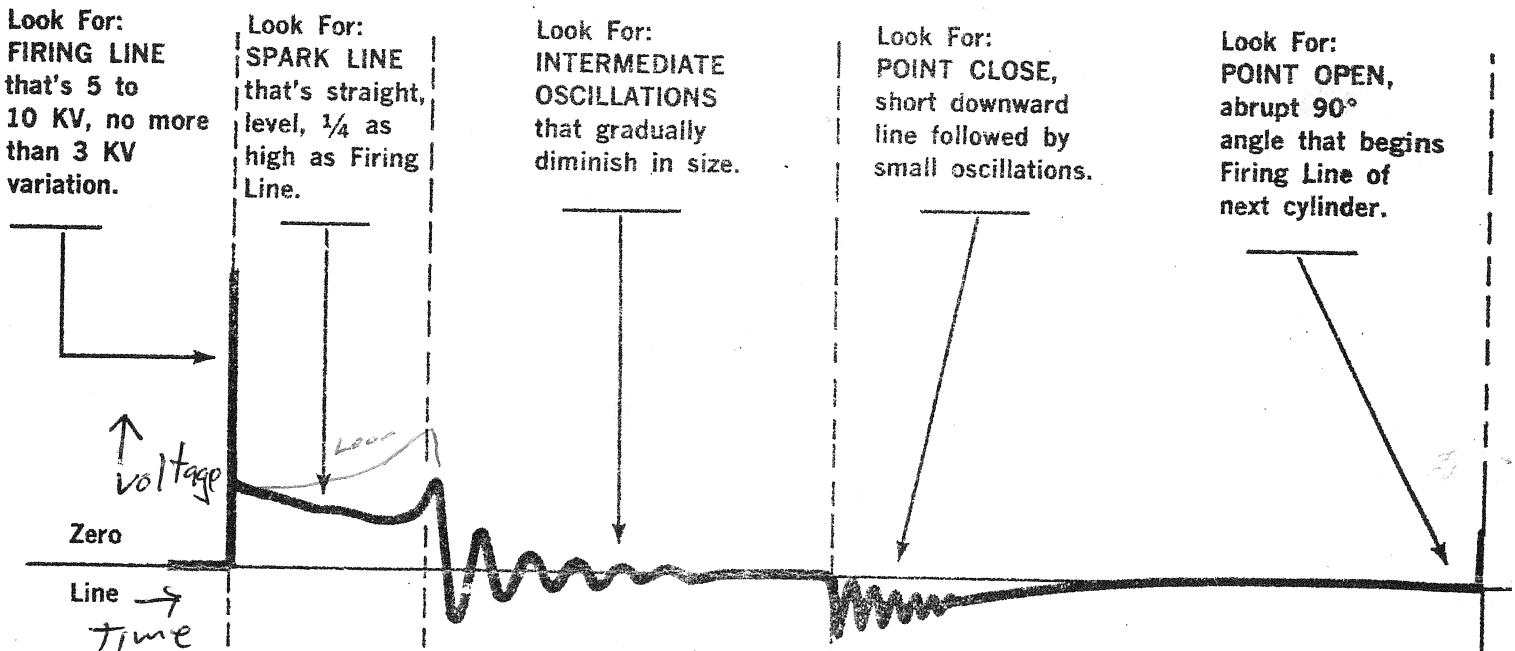
Sun Scope Pattern



Tests:
Plug and rotor gap, broken wires, fuel mixture.

Tests:
Plugs, wires, cap, rotor, or engine condition affecting plug firing.

Tests:
Defect in coil, condenser, or primary circuit.

Tests:
Dirty, burned or misaligned points and weak point tension.

Tests:
Pitted points or arcing from poor condenser action.

Pull off plug wire—FIRING LINE should rise to 20 KV or more for normal coil output. Pattern should also extend below zero line indicating good insulation.

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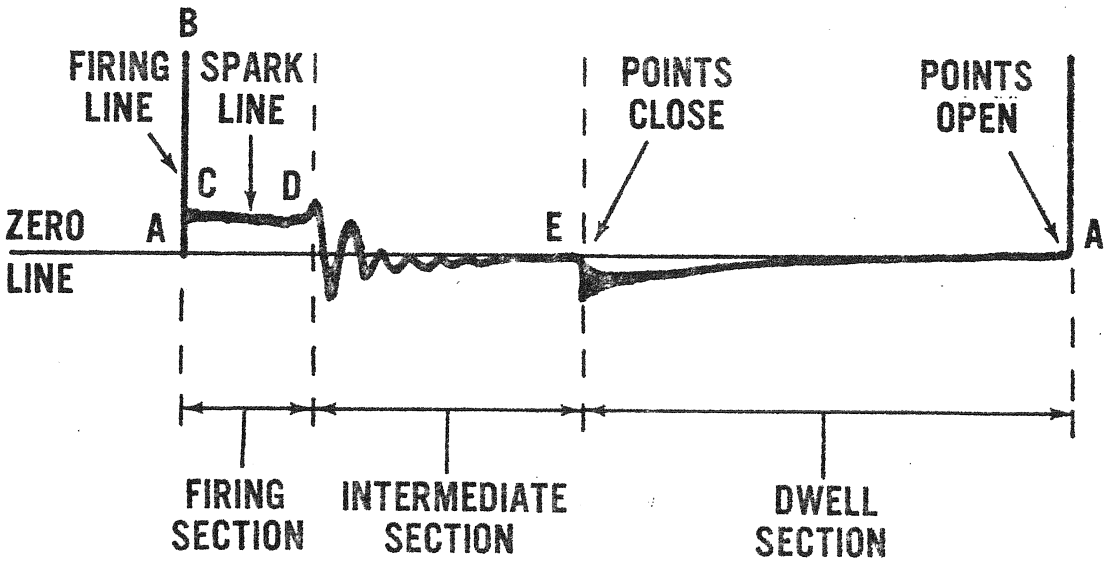
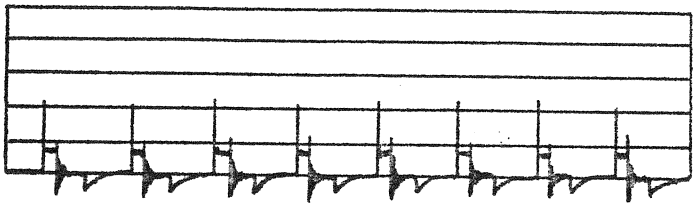
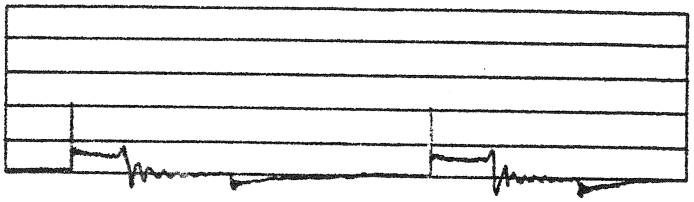
BASIC PATTERN SECTIONS



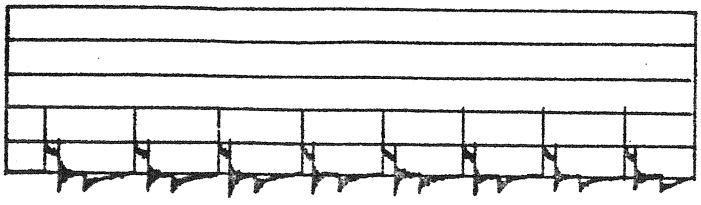
ALL CYLINDERS



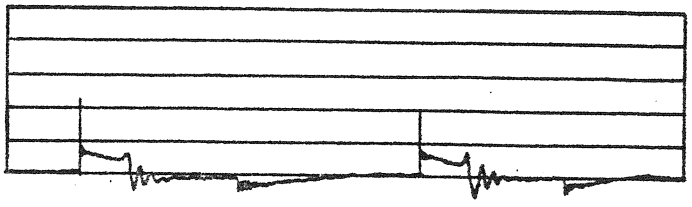
INDIVIDUAL CYLINDER



ALL CYLINDERS WITH SECONDARY SUPPRESSION



INDIVIDUAL CYLINDER WITH SECONDARY SUPPRESSION



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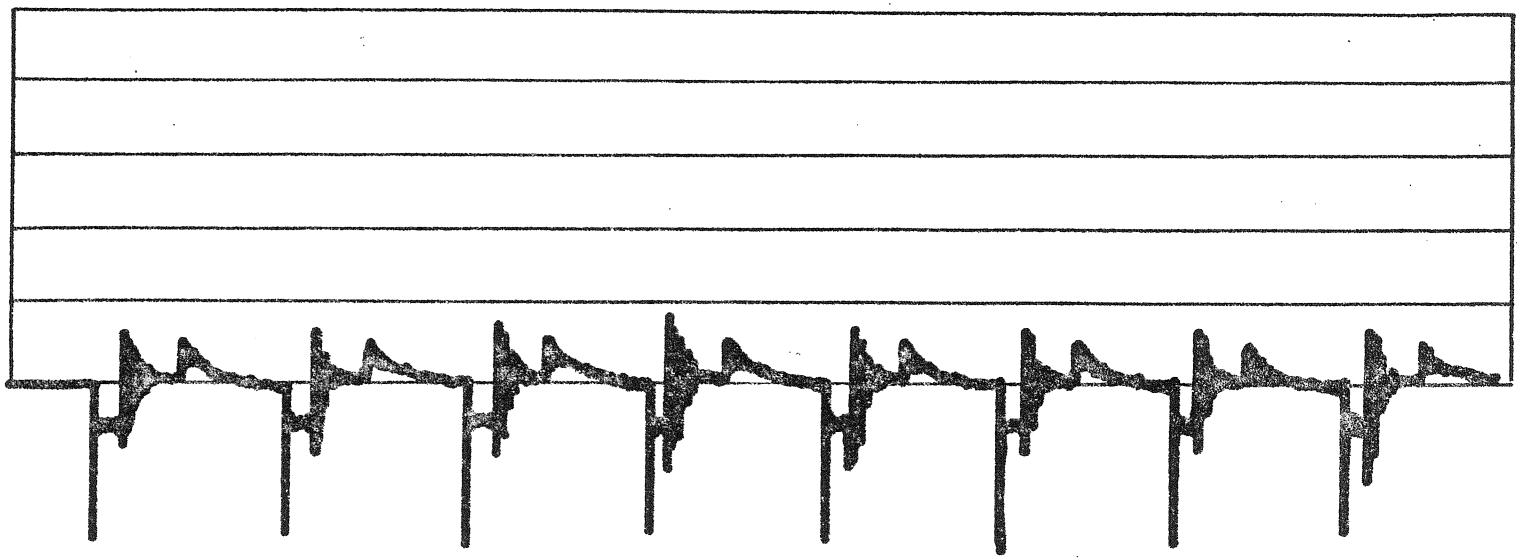
TEST INDICATIONS

UNSATISFACTORY TEST RESULTS

POLARITY

PATTERN INVERTED



PROBABLE CAUSES

SCOPE POLARITY SWITCH IN WRONG POSITION
BATTERY POLARITY REVERSED
COIL IMPROPERLY CONNECTED
INCORRECT COIL FOR THE VEHICLE

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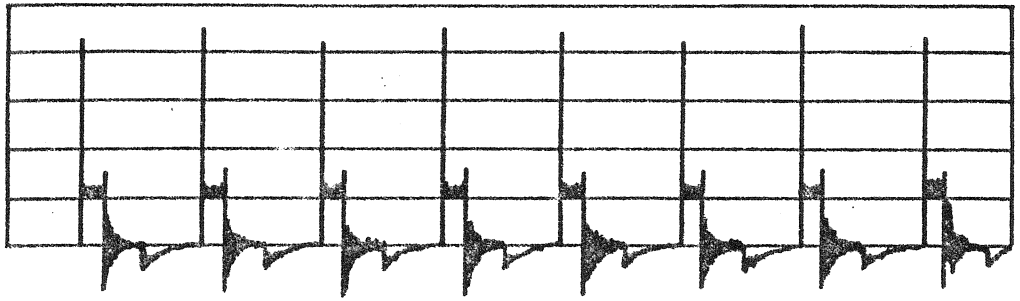
TEST INDICATIONS

UNSATISFACTORY TEST RESULTS — PROBABLE CAUSES

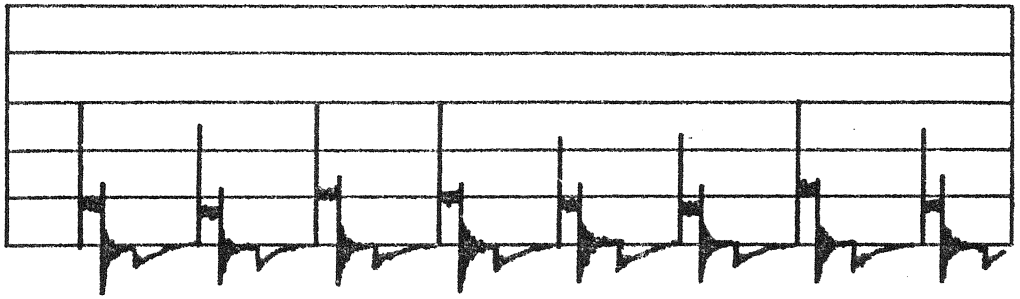
REQUIRED (FIRING) VOLTAGE

FIRING VOLTAGES UNIFORM—BUT HIGH →



- WORN SPARK PLUG ELECTRODES
- LATE IGNITION TIMING
- LEAN FUEL MIXTURE
- TOO LARGE ROTOR GAP
- BREAK IN THE COIL WIRE

UNEVEN FIRING VOLTAGES →



- WORN SPARK PLUG ELECTRODES
- UNBALANCED FUEL MIXTURE
- BREAKS IN SPARK PLUG WIRES
- COCKED OR WORN DISTRIBUTOR CAP

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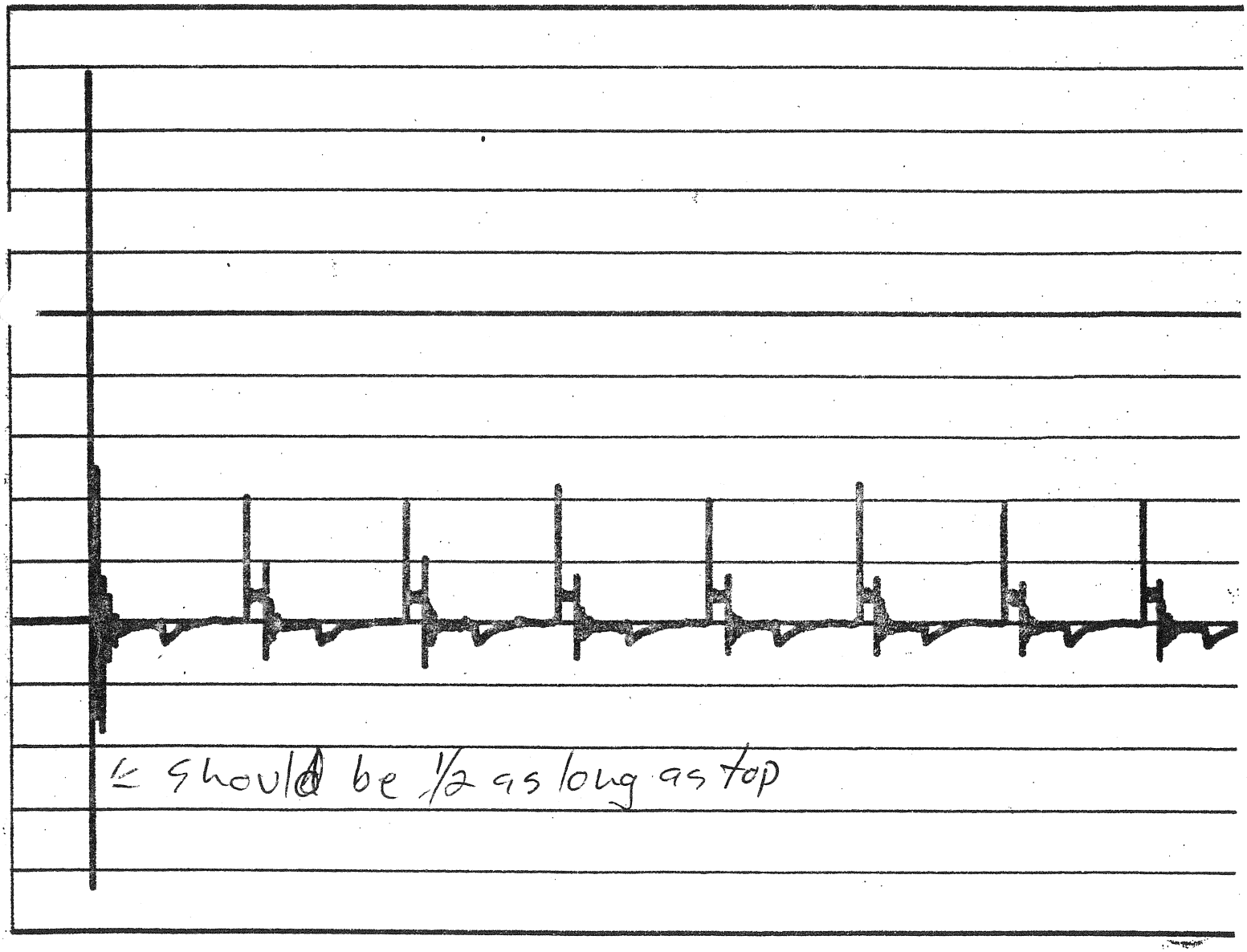
TEST INDICATIONS

UNSATISFACTORY TEST RESULTS	PROBABLE CAUSES
AVAILABLE VOLTAGE	
INSUFFICIENT AVAILABLE VOLTAGE. ——→	EXCESSIVE RESISTANCE IN THE PRIMARY CIRCUIT
	LOW PRIMARY INPUT VOLTAGE
	DEFECTIVE COIL
	DWELL LESS THAN SPECIFIED
	DEFECTIVE SECONDARY INSULATION



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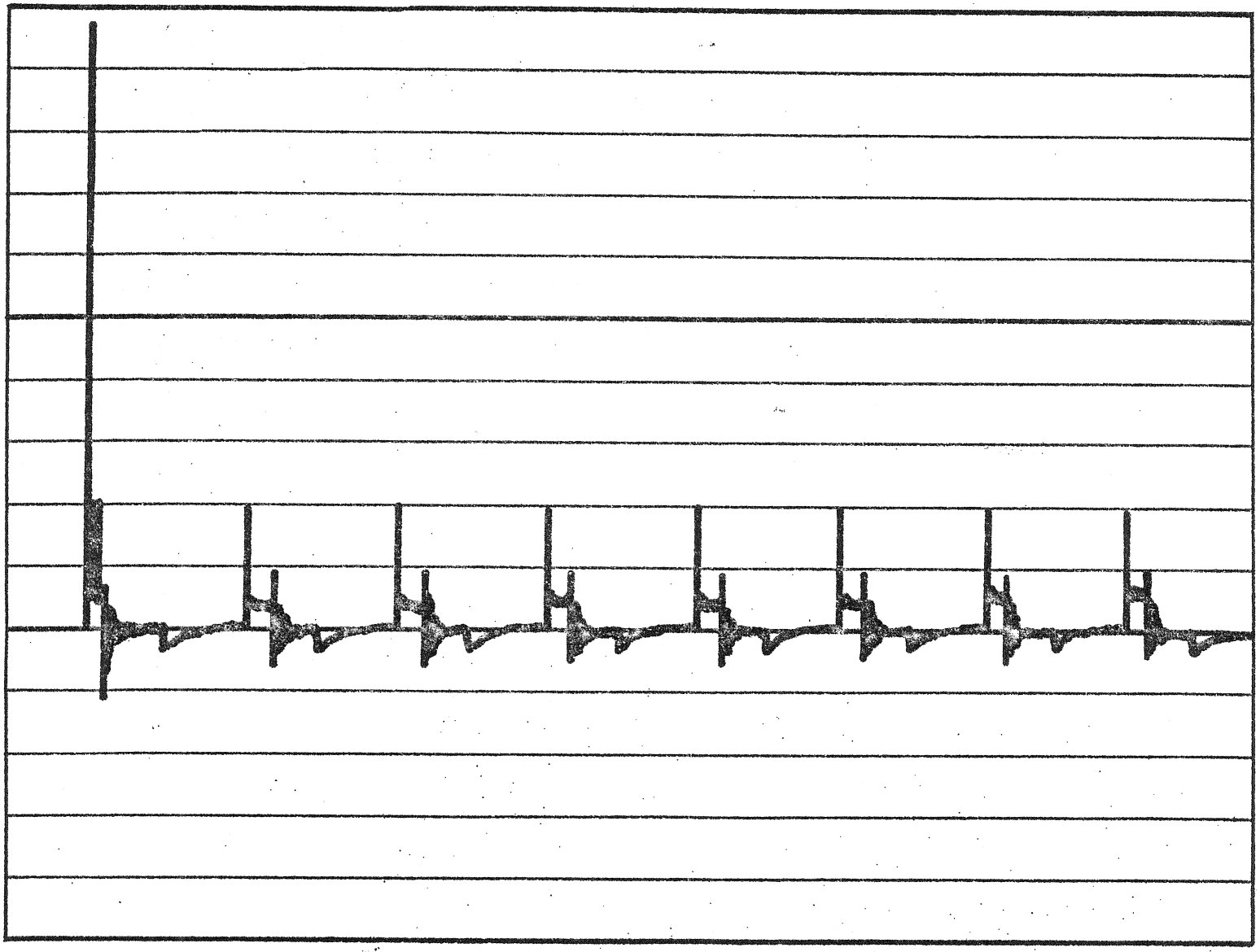
TEST INDICATIONS

UNSATISFACTORY TEST RESULTS

PROBABLE CAUSES

SECONDARY INSULATION

SHORT, INTERMITTENT, OR ABSENT LOWER EXTENT. ——→ INSULATION LEAKAGE IN:



COIL
COIL TOWER
ROTOR
COIL WIRE
DISTRIBUTOR CAP
SPARK PLUG WIRE
(SEE BELOW)

ON ALL CYLINDERS:
COIL TOWER, ROTOR, COIL WIRE OR DISTRIBUTOR CAP

ON ONE OR MORE CYLINDERS:
DISTRIBUTOR CAP OR SPARK PLUG WIRES

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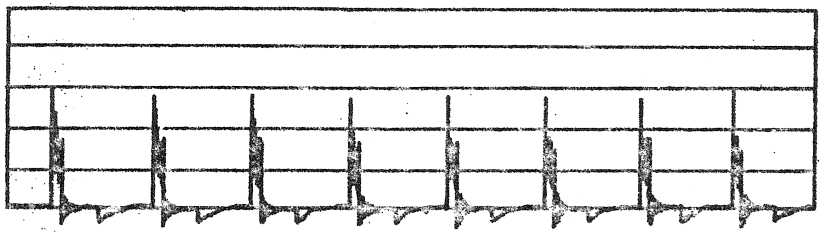
TEST INDICATIONS

UNSATISFACTORY TEST RESULTS — PROBABLE CAUSES

SECONDARY RESISTANCE

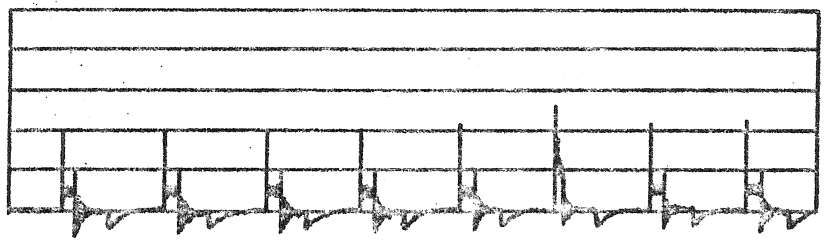
AFFECTING ALL CYLINDERS. →



→ HIGH RESISTANCE IN:
- COIL TOWER
- COIL WIRE
- ROTOR
- DISTRIBUTOR CAP TOWERS

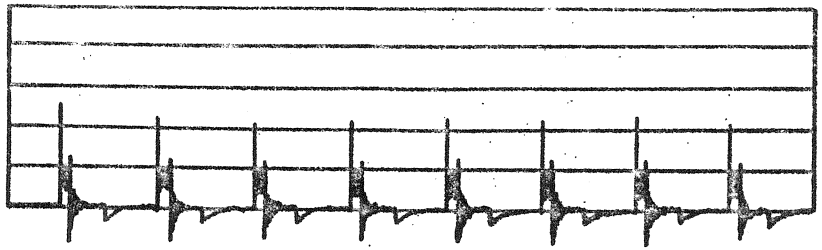
DEFECTIVE RADIO SUPPRESSOR

AFFECTING ONE OR MORE CYLINDERS. →



→ HIGH RESISTANCE IN:
- DISTRIBUTOR CAP TOWERS
- SPARK PLUG WIRE
- SPARK PLUG
- RADIO SUPPRESSOR

AFFECTING ALL CYLINDERS. →



→ POOR CONTACT BETWEEN ROTOR AND CENTER BUTTON OF DISTRIBUTOR CAP

ACCUMULATION OF DEPOSITS ON SPARK PLUGS

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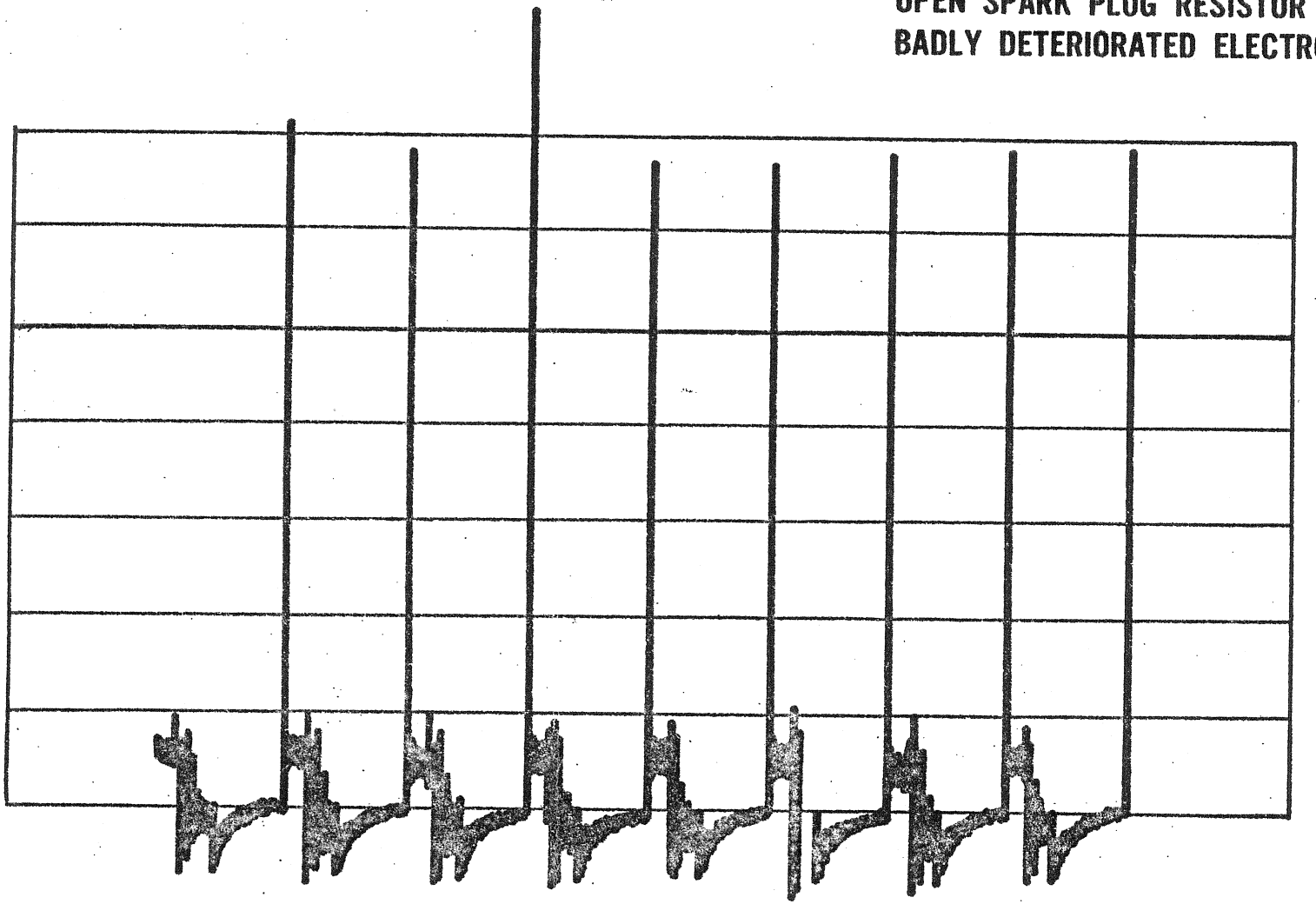
81

TEST INDICATIONS

SPARK PLUGS UNDER LOAD

ONE OR MORE FIRING LINES HIGHER THAN OTHERS. ⟶ WIDE PLUG GAP
OPEN SPARK PLUG RESISTOR
BADLY DETERIORATED ELECTRODES



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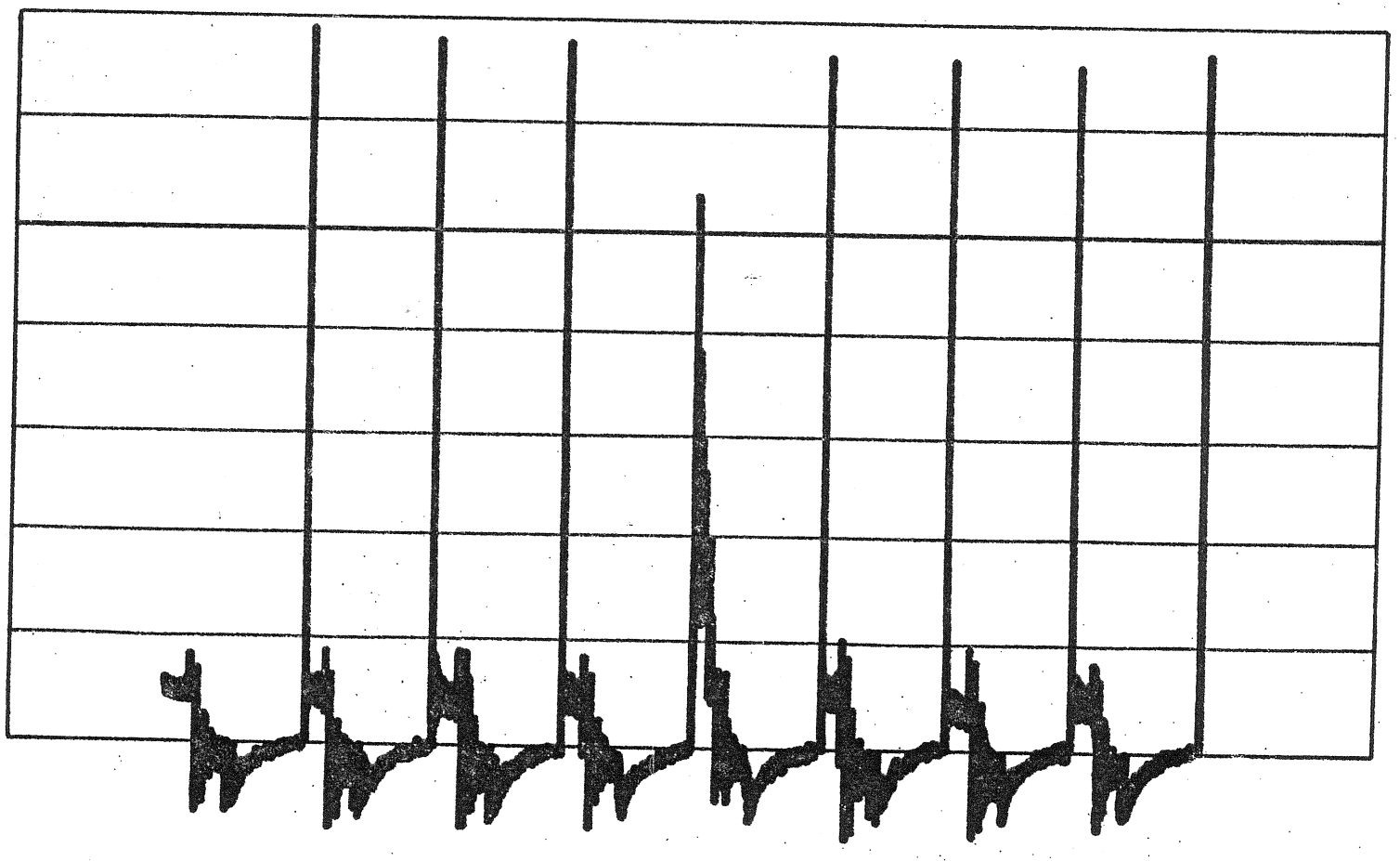
TEST INDICATIONS

UNSATISFACTORY TEST RESULTS — PROBABLE CAUSES

SPARK PLUGS UNDER LOAD

ONE OR MORE LINES LOWER THAN OTHERS. → SPARK PLUG FOULING
FLASHOVER
CRACKED INSULATOR



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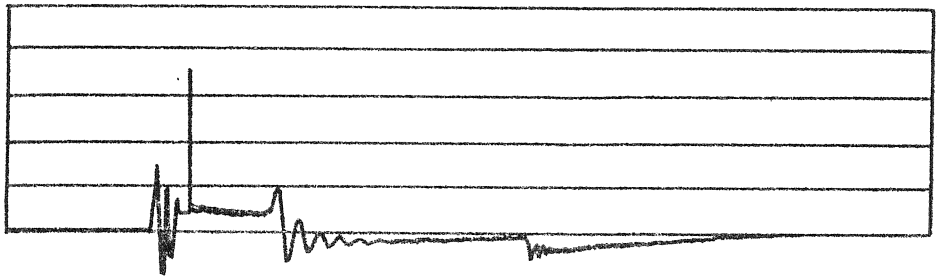
TEST INDICATIONS

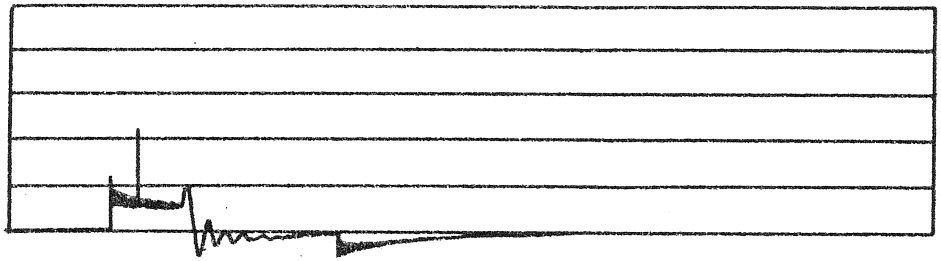
UNSATISFACTORY TEST RESULTS

PROBABLE CAUSES

POINT CONDITION AND ACTION

UNUSUAL POINT OPEN SIGNAL. ⟶ DIRTY POINTS
BURNED POINTS
HIGH CONDENSER SERIES RESISTANCE





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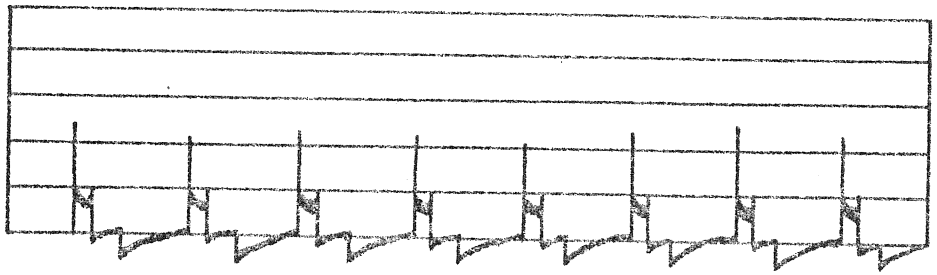
TEST INDICATIONS

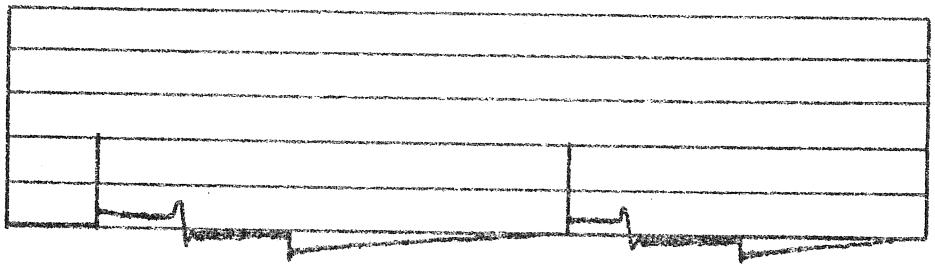
UNSATISFACTORY TEST RESULTS

PROBABLE CAUSES

COIL AND CONDENSER

LACK OF OSCILLATIONS IN INTERMEDIATE SECTION. ——→ SHORT IN THE COIL
LEAKY CONDENSER





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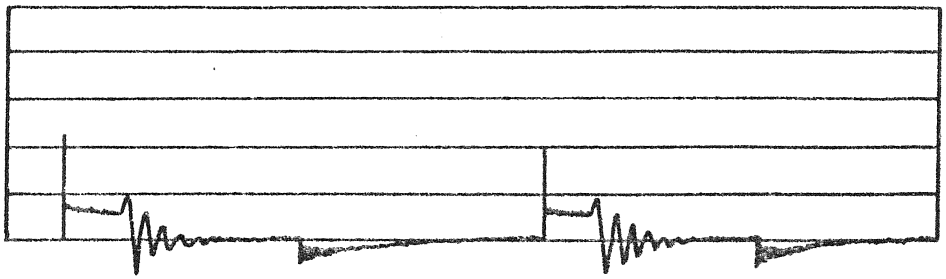
TEST INDICATIONS

UNSATISFACTORY TEST RESULTS

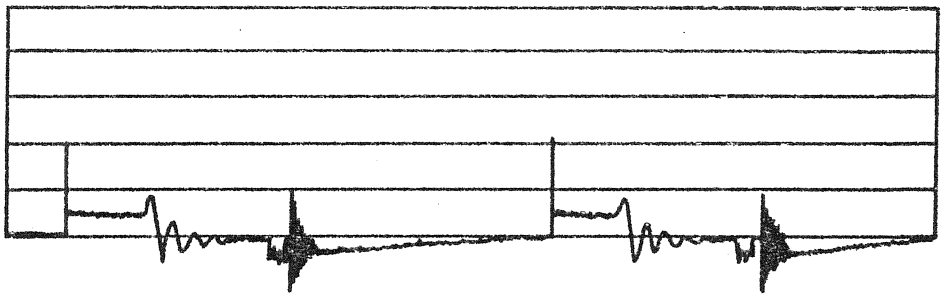
PROBABLE CAUSES

POINT CONDITION AND ACTION

UNUSUAL POINT CLOSE SIGNAL. → POOR POINT CONTACT OR POINT MISALIGNMENT



UNUSUAL POINT CLOSE SIGNAL. → POINT BOUNCE
WEAK POINT SPRING TENSION



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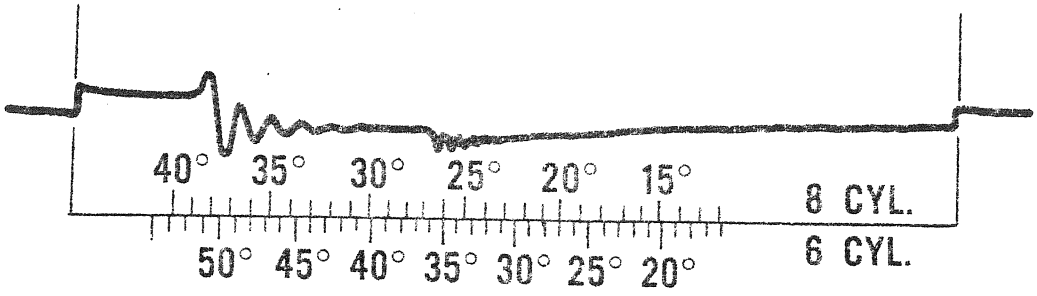
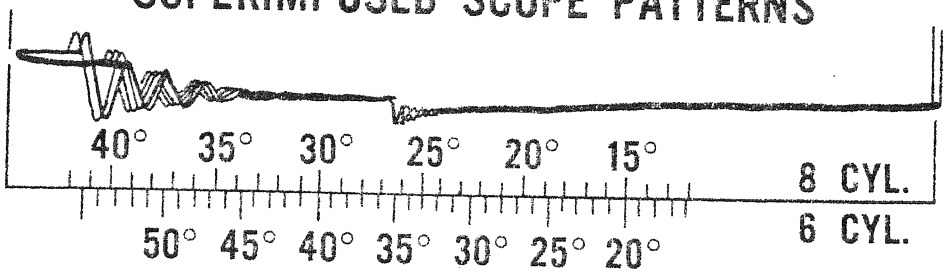
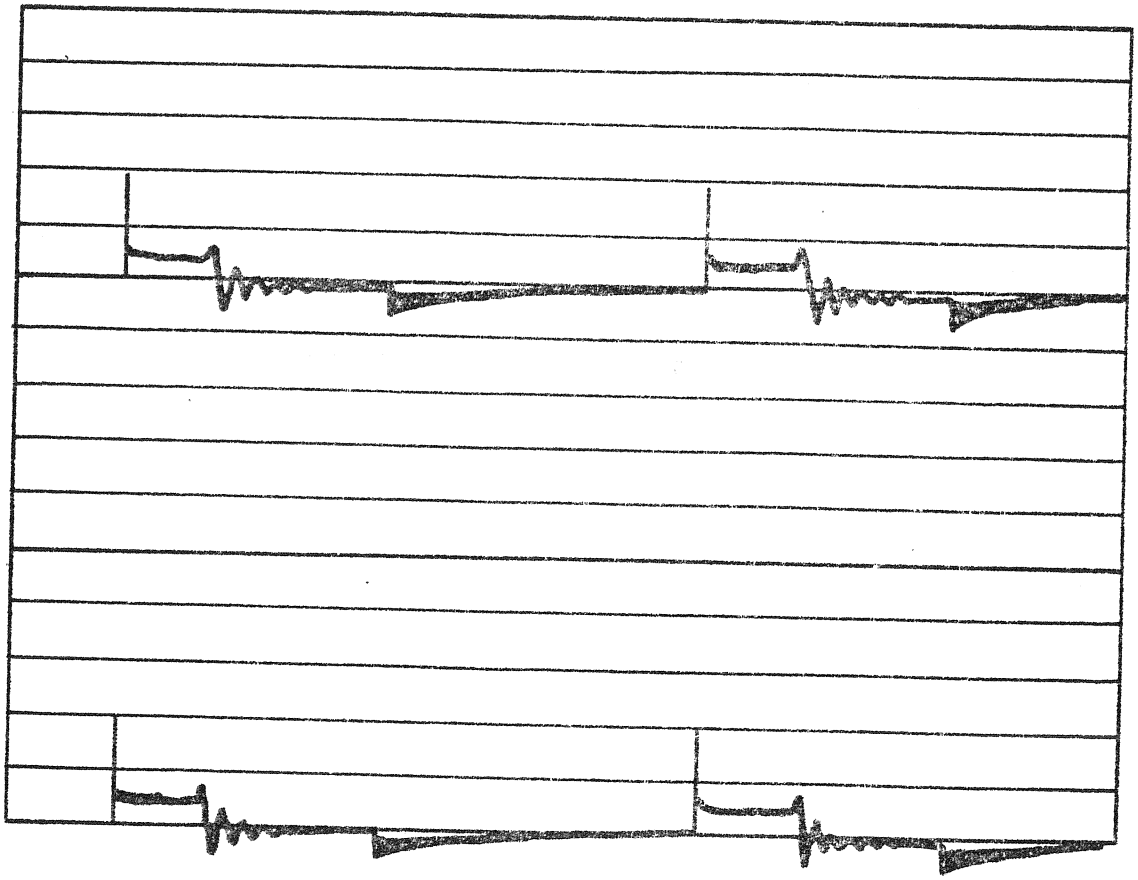
SUN SCOPE DWELL TEST



SUPERIMPOSED SCOPE PATTERNS



COMPARISON TEST



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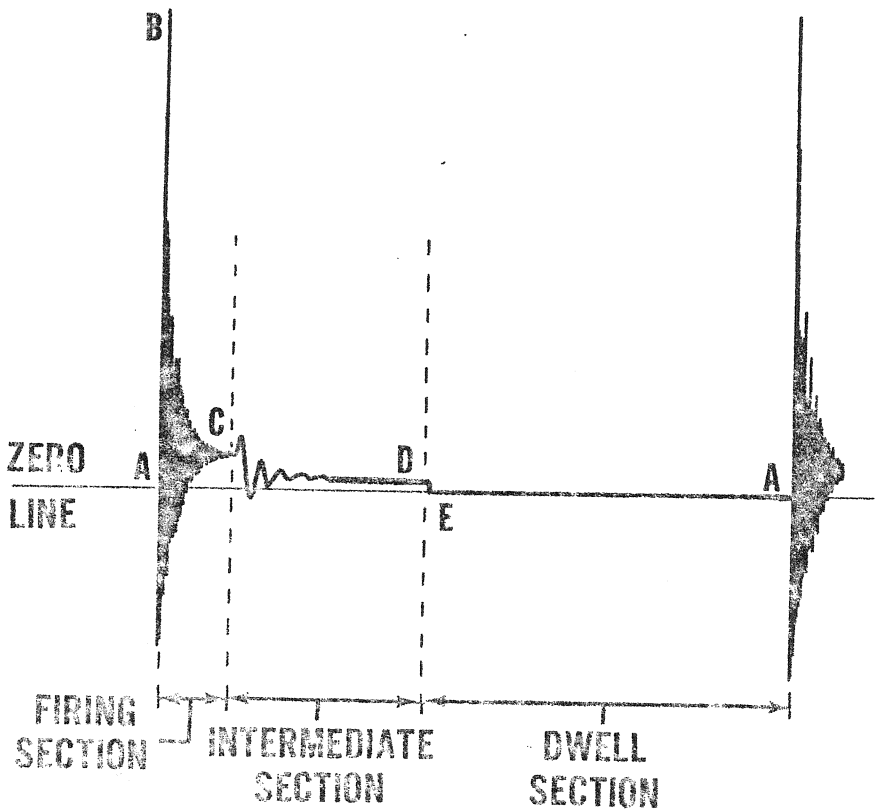
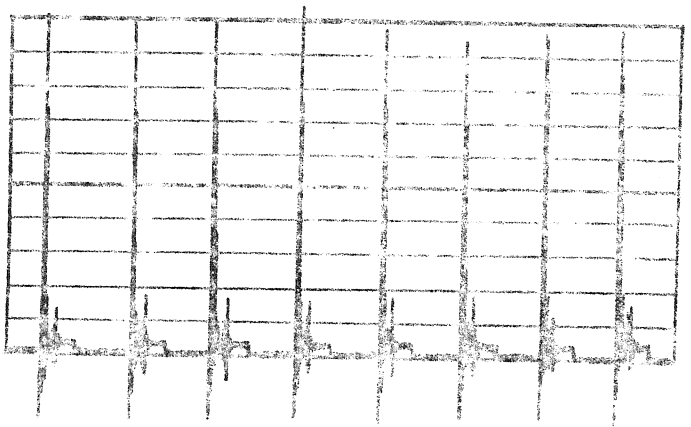
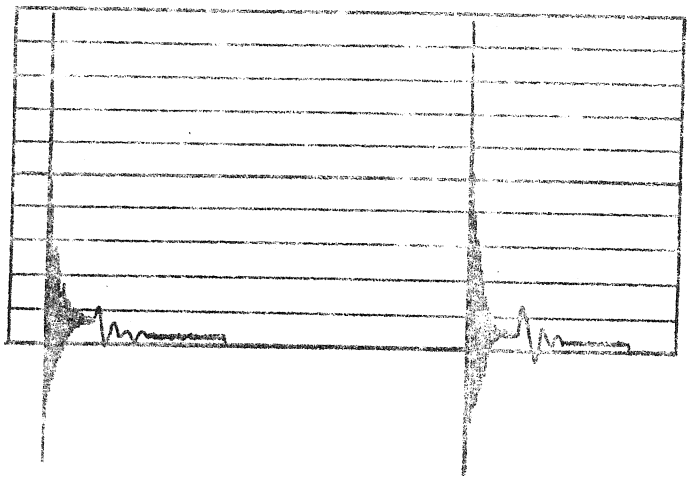
PRIMARY WAVEFORM INTERPRETATION



TYPICAL PRIMARY PATTERNS



ALL CYLINDERS



INDIVIDUAL CYLINDERS

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